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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,311	04/02/2004	Grant Edward Carlson	STL11717	1862

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EXAMINER

EDWARDS, ANTHONY Q

ART UNIT	PAPER NUMBER
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2835

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/817,311

Applicant(s)

CARLSON ET AL.

Examiner

Anthony Q. Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9,11-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,11-18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 11 and 14-16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 6,906,914 by Stamos. Referring to claim 9, Stamos discloses a shelf (28) comprising an enclosure defining a tubular closed passage with a frontend opening and a backend opening (see Figs. 2C and 4A), the shelf having a frontend partition (30) adapted for supporting a first component (34) inserted in the frontend (see Fig. 3), a removable backend partition (i.e., the lower portion of 46) adapted for supporting a second component (36) inserted in the backend (see Figs. 3 and 4A), and a backplane support (i.e., the upper portion of 46) fixed to the backend partition and adapted for fixing a backplane (42) to the backplane support to support the backplane while removably connecting the first and second components to opposing sides, respectively, of the backplane. That is; while the system is in the operative condition shown in Fig. 3.

Although the invention is not identically disclosed or described as set forth in section 102 of Title 35 USC, the differences between the subject matter sought to be patented and the prior art are such that the subject as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to

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which said subject matter pertains, since Stamos discloses the backplane (42) “fixed” to the backplane support by compressively holding the backplane between the middle portion of the shelf (28) and the backplane support. See Fig. 7 and the corresponding specification.

Stamos also teaches the backplane (42) “fixed” to the shelf (28) via alignment members (29a/29b) and stop members (40), provided along the periphery of a middle portion of the shelf. The alignment and stop members mate with engaging alignment holes (41), provided in the backplane (42). See Figs. 4A-4C and col. 3, line 60 through col. 4, line 10. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the alignment members and stop members, respectively, along the periphery of the backplane support, instead of on the shelf, in order to fix the backplane to the backplane support, since it has been held that a mere reversal of parts is well known in the art of computer chassis for array storage systems (see MPEP 2144.04; *In re Gazda*, 219 F.2d 449, 104 USPQ 400 (CCPA 1955)).

Referring to claim 11, Stamos discloses a shelf, wherein the first component comprises a multiple disc array. See Fig. 4A and col. 4, lines 10-16.

Referring to claim 14, Stamos discloses a shelf, wherein the second component comprises a component selected from a group consisting of a data storage device controller (36), a power supply unit, an interface unit, and a battery unit. See col. 3, lines 29-33.

Referring to claim 15, Stamos discloses a shelf, wherein the backend partition (46) is adapted for supporting a fourth component (38) different than the second component. See Fig. 3 and col. 4, lines 10-16.

Referring to claim 16, Stamos discloses a shelf, wherein the fourth component comprises a component selected from a group consisting of a data storage device controller, a power supply unit (38), an interface unit, and a battery unit. See col. 3, lines 29-33.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-8, 12, 13, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stamos in view of U.S. Patent Application Publication Number US2005/0099766 to Fraley. Referring to claim 1 and the corresponding method claim 17, Stamos discloses the device as substantially claimed, including a backend partition (i.e., the lower portion of 46) that is removable from the shelf and is adapted for operably supporting a component (36) inserted in the backend, a backplane (42) supported by backplane support (i.e., the upper portion of 46) that is removable from the shelf, the backplane operably engageable in electrical connection with the component (36) on one side of the backplane. See Figs. 3 and 4A. Stamos also discloses the system having a multiple device (34) array (see Fig. 3). Stamos does not specifically

disclose a carrier enclosing the plurality of data storage devices (34), and an alignment member extending outwardly from the carrier to engage the backplane.

Fraley discloses a transportable mass data storage system having front and rear access (see Fig. 8), including a multiple device array comprising a carrier (14), enclosing a plurality of data storage devices (18) that are electrically connected to a common connector (30), see Figs. 2 and 4, as well as paragraph 0035, wherein the carrier is operably slidably engageable in a frontend partition toward a backplane. Fraley also discloses the array comprising an alignment member (32) extending outwardly for engagement and alignment purposes (see Fig. 4 and paragraph 0035).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system of Stamos to include a multiple device array comprising a carrier and an alignment member, as taught by Fraley, since the device of Fraley would provide the system of Stamos with an independent carrier or sub-chassis for the multiple data storage devices of Stamos, and allow for blind-mating of the carrier with the main chassis of Stamos.

Referring to claim 2, Stamos in view of Fraley disclose an array storage system, wherein the removable back-end partition (46) comprises the backplane support. See Fig. 4A and col. 4, lines 3-10 of Stamos.

Referring to claims 4 and 5, although Stamos in view of Fraley does not specifically teach an array storage system, wherein the frontend partition is adapted for supporting a second component different from the multiple device array, it would have been obvious to one having ordinary skill in the art at the time the invention was made

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to further modify Stamos to provide a frontend partition adapted for supporting a second component different from the multiple device array, wherein the second component comprises a component selected from a group consisting of a data storage device controller, a power supply unit, an interface unit, and a battery unit, since it has been held that rearranging parts of an invention involves only routine skill in the art (see *In re Japikse*, 86 USPQ 70).

Referring to claims 6-8, 12 and 13, respectively, Stamos in view of Fraley disclose an array storage system, the component (36) comprises a component selected from a group consisting of a data storage device controller (36), a power supply unit, an interface unit, and a battery unit; the backend partition (46) is adapted for supporting a third component (38) different than the component (36); and wherein the third component comprises a component selected from a group consisting of a data storage device controller, a power supply unit (38), an interface unit, and a battery unit. See Fig. 3 and col. 4, lines 29-34 of Stamos.

Referring to claim 18, Stamos in view of Fraley disclose a method for electrically connecting components, including removing the backend partition from the backend opening; removing the backplane; attaching a replacement backplane to the backplane partition; replacing the backend partition in the backend opening. See Fig. 3 and col. 4, lines 10-16 of Stamos.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stamos in view of Fraley, and further in view of U.S. Patent No. 4, 971,563 to Wells, III.

Stamos, as modified, discloses the method for electrically connecting components as

substantially claimed (see the above rejection to claim 17 and 18), except for attaching a characteristically different backplane. Wells teaches providing a modular backplane assembly for computers (see Figs. 1-3), wherein one backplane module (Fig. 2) is replaceable with a characteristically different backplane module (see Fig. 3) for use in the same computer system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to electrically connect components in the system of Stamos, as modified, utilizing a modular backplane assembly, wherein a first backplane is replaced by a characteristically different second backplane, as taught by Wells, since the device of Wells would facilitate conversion among a plurality of modules and allows for upgrades to the modified system of Stamos in a cost efficient manner.

Response to Arguments

Applicant's arguments, see comments on pages 13-20 of the Remarks, filed May 22, 2006, with respect to the rejection(s) of claim(s) 1, 2, 4-8, 12, 13, 17 and 18, under 35 USC 103, have been fully considered and are persuasive. Therefore, the final rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Stamos as modified by Fraley.

Applicant's arguments relating to claim 9 have been fully considered but they are not persuasive. As indicated in the above rejection, Stamos teaches the device and corresponding method as claimed. The Examiner disagrees with the applicant's argument that the backplane 42 is simply "compressingly sandwiched between the chassis 28 and the sub-chassis 46, and not fixed to either one." Stamos (see col. 3,

lines 60-63) teaches the backplane 42 not only compressingly sandwiched, but is also "seated" or fixed to at least the shelf 28, via alignment members (29a/29b) and stop members (40), which mate with holes 41 on the backplane. As indicated above, however, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the shelf of Stamos to provide the alignment members and stop members, respectively, along the periphery of the backplane support, instead of on the shelf, for "fixing" the backplane to the backplane support, since it has been held that a mere reversal of parts is well known in the art.

Furthermore, the Examiner does not agree with the applicant's interpretation that Stamos teaches a "free-floating backplane structure," since the backplane is securely mounted to both the chassis and backplane support as indicated in col. 3, line 60 through col. 4, line 10.

Lastly, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

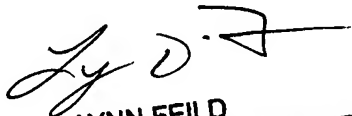
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Q. Edwards whose telephone number is 571-272-2042. The examiner can normally be reached on M-F (7:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2800, ext. 35. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 22, 2006
aqe


LYNN FEILD
SUPERVISORY PATENT EXAMINER